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The conclusion of Mr. Jensen's observations is that the hagfish fastens its egg by wiry, hair-like appendages to objects on the sea bottom. These appendages are fastened to either pole of the egg, which is oval in form. Jensen figures a dead stalk of Cellepora, to which four eggs are attached. He gives also several figures of the sucker-like anchors ("thread cells," or "spider cells"), each with two to four lobes in which the hairs which hold the egg terminate.

A species of hagfish (*Polistotrema stouti*), rather distantly related to Myxine, occurs on the Pacific coast, and is abundant in the Bay of Monterey, where various features of its structure have been studied by several workers in the Hopkins Seaside Laboratory, notably by Dr. G. C. Price, Dr. F. M. McFarland, Dr. C. W. Greene, Dr. Bashford Dean, Dr. Franz Döflein, and Dr. Howard Ayers. For a long time the egg of this species was unknown. At last the Chinese fishermen began to bring them in, saying that they got them by pressing the bodies of the females. Many of them were half decomposed when received. Later Dr. Dean and Dr. McFarland discovered that these eggs were not taken from the females at all, but from the stomachs of the males, which accounts for their half-digested condition. Nearly all the eggs of hagfish thus far found at Monterey are from the stomachs of male fishes.

Dr. Dean figures one individual in which the clumps of wiry filaments which hold the egg are caught in the encasing slime of an adult animal. The investigations of Mr. Jensen indicate that these eggs should be sought on the sea bottom attached to bryozoa or algæ.

Mr. Jensen notes that the Atlantic hagfish has no larval or Ammocœtes stage, such as the lamprey passes through, the young, of six centimeters, being similar to the grown fish. In this respect the California hagfish agrees with Myxine.

D. S. J.

Waite's Fishes of the Thetis Expedition. — In the *Memoirs of the Australian Museum*, Mr. Edgar R. Waite gives an account of the fishes taken by the trawling expedition of H. M. S. C. *Thetis*, Capt. C. P. Hildebrand, in the waters about Port Jackson. The collection obtained, of which a brief preliminary report has been already published, is a very interesting one, and the paper is one of the most valuable contributions yet made to the natural history of Australia. The excellent plates are to be especially commended.

One hundred and seven species were obtained by the *Thetis*, nine of which are new. These are: *Dasyatis thetidis*, *Chimæra orgilbyi*, *Anthias pulchellus*, *Monacanthus setosus*, *Sebastes* (rather Sebastodes) *thetidis*, *Lepidotrigla modesta*, *Parapercis ocularis*, *Histiopterus farnelli*, and *Paralichthys tenuirastrum*. A new name, *var. elevatus*, is proposed for the Australian representative of *Macrorhamphosus scolopax*. Two new genera, Paratrachichtys (trailli) and Pterygotrigla (polyommata, in place of Hoplonotus, preoccupied), are defined.

Perhaps the most interesting of the new forms is *Sebastodes thetidis*. That genus, now known to be represented by about fifty species off the coast of California and a dozen more in Japan, and a few off Chili, has its range thus extended southward to Australia. The new species is one of the extremes of the type, somewhat allied to *S. nigrocinctus*, but still more spinous about the head. In the present system it would be the type of a distinct subgenus, or possibly genus, standing at the very opposite extreme of the series from *Sebastodes paucispinis*, the original type of the genus.

The nomenclature and sequence adopted by Mr. Waite are thoroughly modern and in accordance with the law of priority. We may perhaps question the identity of the Australian horse mackerel with *Sarda chilensis* of Chili, or of the kingfish with *Lenola lalaudi* of Brazil. These identifications have been accepted by authors, the present writer among the number, but it seems better not to regard a species as cosmopolitan until actual comparison has shown it to be so. In most cases of this kind comparison of adequate material will show specific difference.

It is to be hoped that this very acceptable piece of work will be followed by many others until the natural history of Australia is thoroughly known.

D. S. J.

Smitt on Lycodes. — In *Annals and Magazine of Natural History*, Professor F. A. Smitt, of Stockholm, has a brief review of the species of Lycodes of the North Atlantic. He maintains that all specimens known to him are referable to four species. *Lycodes reticulatus*, vahlii, sarsii, and muræna. *Lycodes perspicillum* (*L. rossii*), he thinks, is the young of *L. reticulatus*, which is probably correct. *Lycodes frigidus* is a "mixture of sterile or deformed specimens" of vahlii and reticulatus. *Lycodes gracilis* is a northern variety of *L. vahlii*, with the head shorter (less than 22 per cent of total length ; more than 22 per cent in typical vahlii). He suggests that *Lycodes murœna* is probably "a local or evolutional form of *Lycodes sarsii*." But that is about all that one could claim for any of the species in a group like Lycodes, in which the species are all closely related and vary much with conditions.